Serial No. 10/050,384

REMARKS

This amendment is responsive to the official action dated May 9, 2003. Claims 1-3 were pending in the application. Claims 1-3 were rejected. No claims were allowed by the Examiner.

By way of this amendment, the Applicant has amended the title of the application. Claim 1 has also been amended. Claims 2 and 3 remain unchanged.

Accordingly, Claims 1-3 are currently pending.

I. REVISIONS TO THE SPECIFICATION:

The Examiner objected to the title of the invention as not being descriptive of the invention to which the claims are directed. The Applicant has amended the title to adopt the language suggested by the Examiner.

II. REJECTION OF CLAIMS UNDER 35 USC 102

Claims 1-3 were rejected under 35 USC 102(e), as being anticipated by US Patent No. 6,147,301 issued to Bhatia. The Examiner has stated that the invention in Bhatia discloses a method of forming a structural frame including providing a base polymer matrix, mixing a thermally conductive fiber into the base matrix, injection molding the material into a structural frame, providing a circuit board, mounting the circuit board to the frame to allow heat to be dissipated from the circuit board through the frame. Further, the Examiner states that with respect to Claim 2, Bhatia teaches a base polymer matrix of liquid crystal. With respect to Claim 3, Bhatia teaches carbon fiber, metallic flakes, boron nitride and mixtures thereof.

The disclosure in Bhatia however has been mischaracterized by the Examiner. The Disclosure relates to providing non-structural case components for laptop computers and not structural frames for the construction of such a device. The disclosure further describes the limitations associated with constructing such a case assembly from a uniformly filled polymer material. Specifically, Bhatia states that uniformly filled polymer material is too brittle for the outer case applications anticipated within the disclosure. Bhatia states that when, "sufficiently high amounts of graphite fibers are introduced, the graphite causes the formed plastic to become brittle... the

degradation in the impact resistance of the plastic material can result in the enclosure to shatter when dropped." (Col. 5, Lines 29-34). In order to overcome the drawbacks in such a technique, Bhatia discloses a directionally distributed non-linear graphite loading factor where there is no graphite near the exterior surface of the part with a loading near 50% on the interior surface of the part. Bhatia does not disclose a uniform distribution of filler throughout the composition as provided for in the claims of the present application as amended.

Additionally, the disclosure in Bhatia specifically relates to case components for electronics devices where the impact resistance of the outer surfaces of parts is critical. The disclosure in Bhatia does not in any way relate to structural frames for supporting the internal components of an electronic device. The present invention relates to structural frames that are utilized within electronic devices. Circuit boards and electronics devices are mounted directly onto the frame and then a case element is subsequently installed thereon. The two applications, the case components in Bhatia and the structural frames in the present invention, are entirely different and are subject to different limitations. The present invention does not require a differential loading throughout the part to provide impact resistance on one side and thermal conductivity on the other. The present invention discloses a uniform loading to provide for a high level of thermal conductivity throughout the part. The electronic devices are mounted directly to the frame assembly not proximal to the case components as disclosed in Bhatia.

The distinction noted above wherein the electronic devices are mounted directly onto the structural frame rather than proximal to the case is important also because, the frame of the present invention is in direct thermal communication with the heat generating electronics components mounted thereon. This direct contact provides a for a highly conductive passive thermal dissipation pathway. There is no air gap as disclosed in Bhatia. The uniform loading coupled with the direct contact between the structural frame and the heat-generating device is the core of the present invention, providing a passive heat dissipation pathway directly from the heat-generating device through the structural frame to additional heat dissipation structure throughout the devices such as heat sinks or heat pipes.

Finally, the Examiner asserts that Bhatia discloses conductive filler materials of carbon fiber, metallic flakes, boron nitride and mixtures thereof. Bhatia only discloses

the use of graphite (carbon) fibers. There is no disclosure anywhere in the cited reference that refers to the use of filler other than graphite. Further, there is no disclosure within the cited reference that provides for mixtures of the various fillers to tailor the composition to specifically suit the application at hand.

Since the disclosure in Bhatia fails to disclose several of the limitations provided in the Applicant's invention as amended, the cited reference cannot anticipate the present application. Specifically, since Bhatia does not provide for a structural frame to which electronic components are mounted in thermal communication, a uniform distribution of filler throughout the composition or the use of any fillers other than graphite fibers, the rejection cannot be maintained. Reconsideration, and withdrawal of the rejection is respectfully solicited.

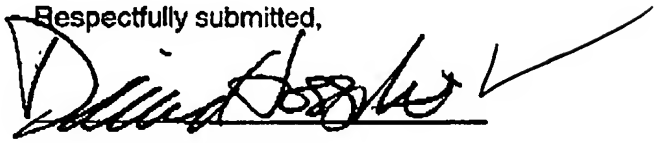
III. CONCLUSION

Accordingly, Claims 1-3 are in condition for allowance and the application ready for issue.

Corresponding action is respectfully solicited.

PTO is authorized to charge any additional fees incurred as a result of the filing hereof or credit any overpayment to our account #02-0900.

Respectfully submitted,



David R Josephs, Esq.
Reg. No. 34,632

BARLOW, JOSEPHS & HOLMES, Ltd.
101 Dyer Street, 5th Floor
Providence, RI 02903
(401) 273-4446 (tel)
(401) 273-4447 (fax)
drj@barjos.com